

In a ninth embodiment, the transverse cross-sectional shape of second part **10b** is elliptical as depicted in FIGS. **14A** and **14B**. Said second part **10b** is slideably received with a circular in cross-section second section **16** of a pin-receiving bore.

In a variation of the ninth embodiment, depicted in FIG. **14C**, second part **10b** has a cylindrical construction and hence a circular transverse cross-section. It is slidingly received in a bore or pinhole having a second section **16a** that is elliptical in transverse cross-section.

In a tenth embodiment, the transverse cross-sectional shape of second part **10b** is like a plus sign (+) as depicted in FIGS. **15A** and **15B**. Said second part **10b** is slideably received with a circular in cross-section second section **16** of a pin-receiving bore.

In a variation of the tenth embodiment, depicted in FIG. **15C**, second part **10b** has a cylindrical construction and hence a circular transverse cross-section. It is slidingly received in a bore or pinhole having a second section **16a** that is plus sign (+) shaped in transverse cross-section.

In an eleventh embodiment, the transverse cross-sectional shape of second part **10b** is crescent-shaped as depicted in FIGS. **16A** and **16B**. Said second part **10b** is slideably received with a circular in cross-section second section **16** of a pin-receiving bore.

In a variation of the eleventh embodiment, depicted in FIG. **16C**, second part **10b** has a cylindrical construction and hence a circular transverse cross-section. It is slidingly received in a bore or pinhole having a second section **16a** that is crescent-shaped in transverse cross-section.

In a twelfth embodiment, the transverse cross-sectional shape of second part **10b** is star-shaped as depicted in FIGS. **17A** and **17B**. Said second part **10b** is slideably received with a circular in cross-section second section **16** of a pin-receiving bore.

In a variation of the twelfth embodiment, depicted in FIG. **17C**, second part **10b** has a cylindrical construction and hence a circular transverse cross-section. It is slidingly received in a bore or pinhole having a second section **16a** that is star-shaped in transverse cross-section.

The star-shaped transverse cross-section of FIGS. **17A** and **17B** is the transverse cross-sectional shape of pin second part **10b** that will be incorporated into a commercial embodiment of the invention.

In summary, second section **10b** of each pinhole or bore has a circular cross-section as indicated in phantom lines in FIGS. **8B–17B** and a non-circular cross-section as indicated in phantom lines in FIGS. **8C–17C**. Accordingly, when second part **10b** of Braille pin **10** has a square or other non-circular cross-section, a “square peg in a round hole” phenomena is observed, i.e., the radially outermost edges of the fins or projections make a sliding linear or knife blade-like contact with the annular walls of bore second section **16**. Alternatively, when pin second part **10b** has a cylindrical cross-section and is slidingly received within a bore or pinhole **16a** having a noncircular transverse cross-section, the same phenomenon is observed. In both alternatives, less contact surface area is created than when the transverse

cross-section of the pin matches the transverse cross-section of the pinhole due to the decrease in surface area contact. A reduction in contact surface area is also provided when second part **10b** has any other non-circular cross-sectional shape such as the shapes mentioned above. The invention is not limited to the shapes specifically listed but includes any non-circular geometric shape.

The reduction in contact surface area reduces the probability that debris can become trapped in the interface between the radially outermost edges of the fins or projections and thus reduces the probability that a pin will be stuck in any position as a result of said trapped debris. The presence of the overhang, however, virtually eliminates the probability of any debris ever working itself into such interface. The device is therefore more tolerant of contaminants or other debris of the type that often causes the cylindrical Braille pins of the prior art to become stuck in their cylindrical bores in an “up” or “down” position or any position therebetween.

The alternative embodiments have the advantage that all Braille pins **10** used therewith have a cylindrical second part **10b** but the disadvantage of a large, irregular-shaped second section of a pinhole or bore **16a** to accommodate such cylindrical third part with reduced surface contact.

The novel Braille pin provides a quiet actuation. The Braille pin design embodies the use of low durometer materials in areas of impact to reduce the noise from the transition of the Braille dots when the display refreshes.

The novel Braille pins can be constructed of anti-bacterial plastics or employ the use of other anti-bacterial materials to provide a healthier reading environment.

It will thus be seen that the advantages set forth above, and those made apparent from the foregoing description, are efficiently attained and since certain changes may be made in the above construction without departing from the scope of the invention, it is intended that all matters contained in the foregoing description or shown in the accompanying drawings shall be interpreted as illustrative and not in a limiting sense.

It is also to be understood that the following claims are intended to cover all of the generic and specific features of the invention herein described, and all statements of the scope of the invention that, as a matter of language, might be said to fall therebetween.

What is claimed is:

1. A plurality of Braille pins, comprising:

a base;

a straight neck extending from said base;

said plurality of Braille pins including a first plurality of Braille pins releasably secured to a first side of said neck;

whereby said plurality of Braille pins is collectively adapted to be inserted into a Braille cell, thereby eliminating a need to individually insert Braille pins of said plurality of Braille pins into said Braille cell.

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